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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/572,758

03/21/2006

Yukkiang Lau

5955900029

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32294 7590 10/08/2008
SQUIRE, SANDERS & DEMPSEY L.L.P.
8000 TOWERS CRESCENT DRIVE
14TH FLOOR
VIENNA, VA 22182-6212

EXAMINER

HEITBRINK, JILL LYNNE

ART UNIT

PAPER NUMBER

1791

MAIL DATE

DELIVERY MODE

10/08/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/572,758	Applicant(s) LAU ET AL.	
	Examiner Jill L. Heitbrink	Art Unit 1791	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on reopening prosecution mailed 7/24/08.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-8 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-8 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

1. In view of the Pre-Appeal Brief filed on July 11, 2008, PROSECUTION IS HEREBY REOPENED. New grounds of rejection are set forth below.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1 and 6 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Fujioka et al. Pat. No. 5,551,857.

4. Fujioka discloses an injection molding machine including a cylinder member (39) with a plurality of heaters (34) and an injection member (screw 38). The temperature is detected by temperature detection sections (37) disposed on the cylinder at a plurality of positions. A recorded target temperature distribution range indicating an optimal temperature range at each position is stored in a recording device (col. 3, lines 27-30). A control section adjusts set temperatures of the heaters wherein each temperature detected by the temperature detection sections falls within the target temperature distribution range (col. 1, line 55-col. 2, line 2 and col. 3, lines 30-33).

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Fujioka et al. Pat. No. 5,551,857 as applied to claims 1 and 6 above, and further in view of either Hehl Pat. No. 5159957 or JP 61-235120.

7. Hehl and JP'120 each teach controlling the temperature of the cylinder member by a cooling apparatus disposed at the supply port. It would have been obvious to a person of ordinary skill in the art to provide a cooling apparatus disposed at a supply port in Fujioka when the amount of cooling by the atmosphere is not sufficient to provide the desired control temperature so as to properly feed the plastic from the hopper into the cylinder.

8. Claims 2-5, 7 and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fujioka et al. Pat. No. 5,551,857 as applied to claims 1 and 6 above, and further in view of Buja Pub. No. 2002/0084543.

9. Buja teaches the cooling apparatus being disposed at a supply port and adjusting the set temperature of the cooling medium such that the temperatures detected by the temperature detection sections fall within the target temperature distribution range (paragraphs [0014] and [0107]) and a molding material temperature sensor disposed on a side toward a supply port of the cylinder member to which the molding material is supplied (claim 3). It would have been obvious to a person of ordinary skill in the art to provide a cooling apparatus disposed at a supply port in Fujioka in view of Buja since

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the cooling of the supply port is known for providing the necessary feed from the hopper into the cylinder.

10. Claims 3-5, 7 and 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Fujioka et al. Pat. No. 5,551,857 as applied to claims 1 and 6 above, and further in view of Bulgrin Pat. No. 5,456,870.

11. Bulgrin teaches a molding material temperature sensor disposed on a side toward a supply port of the cylinder member to which the molding material is supplied (col. 20, lines 18-54). It would have been obvious to a person of ordinary skill in the art to use a temperature sensor on a side toward a supply port of the cylinder member in Fujioka in view of the teaching of Bulgrin since the combined use of the thermocouples provides a better adjustment to the temperature control.

12. Claims 1 and 3-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bulgrin Pat. No. 5,456,870 taken together with Fujioka et al. Pat. No. 5,551,857.

13. Bulgrin discloses an injection molding machine including a cylinder member (12) with a plurality of heaters (20) and an injection member (screw 17). The temperature is detected by temperature detection sections (26) disposed on the cylinder at a plurality of positions and material temperature sensors (120). Bulgrin has a console screen 28 which is connected to the programmable controller. Figures 1 and 2 clearly show the set point temperatures shown on the console screen. A recording device would have been inherent in the program controller since these set point temperatures are shown with the thermocouple temperatures to show the operating conditions. The power supplied to the heaters is adjusted so as to obtain a temperature of the set point

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temperatures, such as the means in col. 24, lines 35-40 of Bulgrin. Fujioka teaches a recorded target temperature distribution range indicating an optimal temperature range at each position is stored in a recording device (col. 3, lines 27-30) and a control section adjusts set temperatures of the heaters wherein each temperature detected by the temperature detection sections falls within the target temperature distribution range. It would have been obvious to a person of ordinary skill in the art to control the temperature of the band heaters to the target temperature range in each heater in Bulgrin since the use of temperature range limits is well known as shown by Fujioka so as to provide the desired temperature in the injection molding machine.

14. Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Bulgrin Pat. No. 5,456,870 taken together with Fujioka et al. Pat. No. 5,551,857 as applied to claims 1 and 3-8 above, and further in view of either Hehl Pat. No. 5,159,957 or JP 61-235120.

15. Bulgrin (col. 20, line 59-col. 21, line 2) discloses the cooling by the dissipation of heat to the atmosphere. Hehl and JP'120 each teach controlling the temperature of the cylinder member by a cooling apparatus disposed at the supply port. It would have been obvious to a person of ordinary skill in the art to provide a cooling apparatus disposed at a supply port in Bulgrin when the amount of cooling by the atmosphere is not sufficient to provide the desired control temperature.

Response to Arguments

16. Applicant's arguments with respect to claims 1-8 have been considered but are moot in view of the new ground(s) of rejection.

17.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jill L. Heitbrink whose telephone number is (571) 272-1199. The examiner can normally be reached on Monday-Friday 9 am -2 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Yogendra Gupta can be reached on (571) 272-1316. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Jill L. Heitbrink/
Primary Examiner, Art Unit 1791

Jill L. Heitbrink
Primary Examiner
Art Unit 1791

jlh